

**Title:**

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## Gastric variceal bleeding as a form of presentation of pancreatic neuroendocrine tumor

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Dear Editor,

NETs (neuroendocrine tumors) constitute a heterogeneous group of epithelial-type neoplasms with a predominantly neuroendocrine differentiation. Although the most common locations are the pancreas, digestive tract, and lung, this type of neoplasm can arise in virtually any organ in the body (1). They are rare tumors with a wide variety of clinical presentations (2). Symptomatic tumors are more frequent in younger patients and present at more advanced pathological stages (3).

We present the case of a 42-year-old male with idiopathic splenomegaly and bicytopenia (anaemia and thrombocytopenia) under study by haematology department who was admitted due to an episode of melena and hemoglobin of 4.5 mg/dl. Isolated gastric varices (IGV1) with red spots (Fig 1A) were confirmed at gastroscopy and endoscopic variceal obturation using cyanoacrylate was performed in two sessions. An endoscopic ultrasonography was performed, showing thrombosis of the splenic vein extending towards the splenoportal confluence with anechoic

serpiginous structures outside and inside the gastric wall suggestive of collateral circulation with gastric varices (GV). An increase in portal caliber was observed, with no signs of liver cirrhosis. Computed tomography confirms the findings.

2 months/week/days later he was readmitted with rebleeding signs after starting anticoagulant treatment, so it was decided to perform a splenectomy due to failure of the endoscopic treatment. Histology revealed infiltration of the spleen by a well-differentiated neuroendocrine tumor (NET). Gallium PET/CT and Octreotid scan showed uptake in the body and tail of the pancreas with positivity for somatostatin receptors previously undetected by other means. Finally, treatment was completed with distal pancreatectomy and splenoportal axis thrombectomy with vascular esplenic resection and the patient was discharged from hospital.

## Discussion

GV bleeding is a rare complication of portal hypertension but is typically more severe with higher mortality than other portal hypertensive bleeding (4). The optimal treatment for GVs a topic that remains open for study. Endoscopic management using N-Butyl-2 Cyanoacrylate has shown a high fall rate for acute control of bleeding and early rebleeding (5). Therefore, the most recommended therapeutic option in case of symptomatic left portal hypertension is splenectomy and correction of the primary cause if possible. In these patients it is crucial to consider other causes of portal hypertension, such as splenic vein thrombosis and obstruction, and the possibility of underlying malignancy.

## References

- 1- Raphael MJ, Chan DL, Law C, et al. Principles of diagnosis and management of neuroendocrine tumours. CMAJ. 2017 Mar 13;189(10):E398-E404.
- 2- Ito T, Igarashi H, Jensen RT. Pancreatic neuroendocrine tumors: clinical features, diagnosis and medical treatment: advances. Best Pract Res Clin Gastroenterol. 2012 Dec;26(6):737-53.

- 3- Hurtado-Pardo L, Breeze CE, Cienfuegos JA, Benito A, Valentí V, Martí-Cruchaga P, Zozaya G, Martínez Regueira F, Pardo F, Rotellar Sastre F. Comparison of phenotypes and outcomes following resection of incidental versus symptomatic pancreatic neuroendocrine tumors. *Rev Esp Enferm Dig.* 2022;114:317-322.
- 4- Henry Z, Patel K, Patton H, Saad W. AGA clinical practice update on management of bleeding gastric varices: expert review. *Clin Gastroenterol Hepatol.* 2021;19(6):1098–1107.e1.
- 5- Hu Z, Zhang D, Swai J, et al. Risk of rebleeding from gastroesophageal varices after initial treatment with cyanoacrylate; a systematic review and pooled analysis. *BMC Gastroenterol.* 2020 Jun 9;20(1):181.

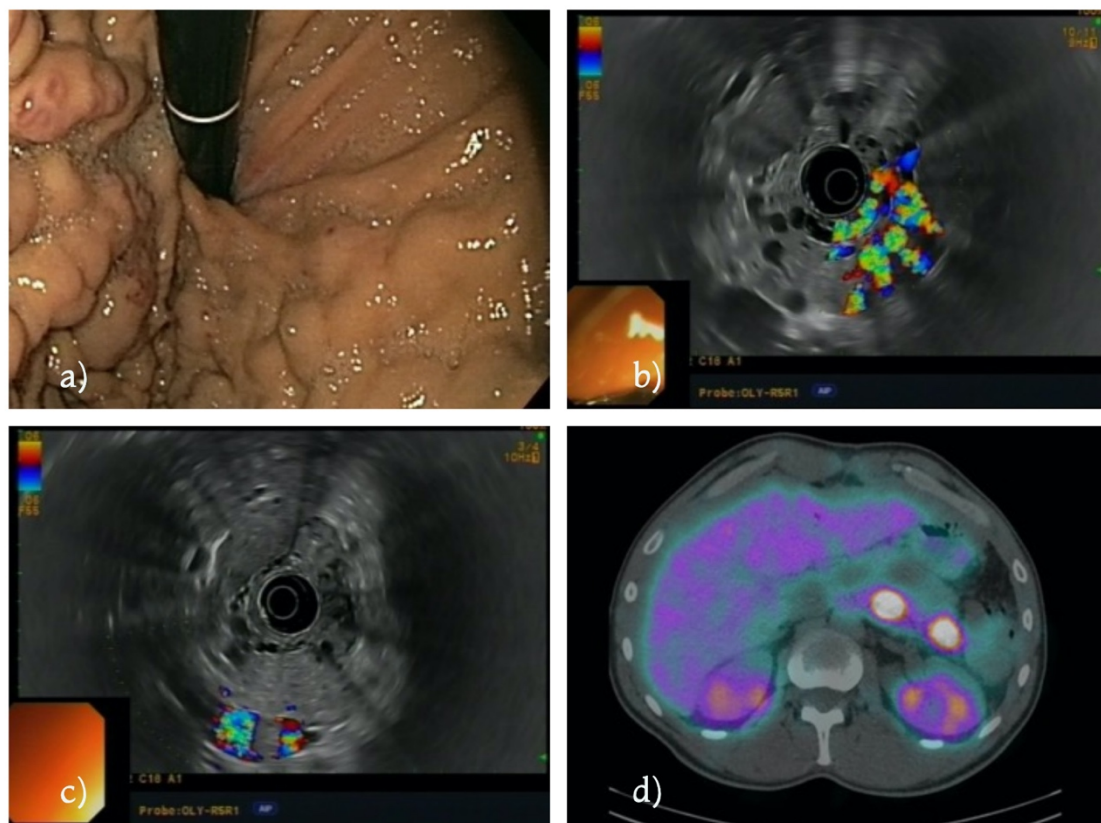


Fig1: A) EGD in retroflexed view revealed gastric varices with red spots in fundus. B) anechoic serpiginous structures outside and inside the gastric wall suggestive of collateral circulation in EUS. C) The splenic vein appears dilated with intraluminal echogenic material and absent signal on color Doppler consistent with its thrombosis

in EUS. D) Octreotid scan showing uptake in body and tail of the pancreas.

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